A Spatial Big Data Approach to Understanding Neighborhood Change and Neighbor Problems

28 February 2025 (FRI)
4:30 – 6:00 pm (UTC+8)
Room 221, Chen Kou Bun Building, CUHK

Large-scale administrative data collected by municipal governments are increasingly being used by researchers to examine various urban socio-spatial phenomena and processes. In this seminar, I will demonstrate how council data from Brisbane, Australia, were utilized to investigate the prevalence of neighbor complaints across urban neighborhoods through a GIS-based spatial approach. I will explore how the changing process of our cities such as gentrification and densification influence the prevalence of problems between neighbours, whether neighborhood characteristics affect the likelihood of neighbor problems and whether there are seasonal trends, particularly in noise-related complaints. Our findings reveal distinct spatial patterns of neighbor disputes, shaped by urban development and evolution. The sources of these issues often lie in a combination of neighborhood social dynamics and environmental factors, such as housing conditions, density, and usage. Moreover, weather conditions appear to moderate psychological tolerance, alter routines, and affect exposure to noise, thereby influencing the incidence of noise complaints. I will conclude by discussing the broader significance of this research and the potential of leveraging this type of naturally occurring administrative data to deepen our understanding of the social dynamics in urban environments.

YAN LIU

Professor of Geographical Information Science
Department of Geography and Resource Management, CUHK

Professor Yan Liu is an internationally recognised leader in *Urban Science* and *Spatial Data Science*, specialising in GIS, urban analytics and modelling, and spatial social studies. Her research outcome has broad impact across coastal city development, urban and regional planning, transport planning, social equality, and healthcare policies. She is a Fellow of the UK Royal Geographical Society and has been recognized as amongst the World's Top 2% Scientists by Stanford University. She serves as an Executive Committee member of the IGU Applied Geography Commission, and is an editorial board member of *Computers, Environment and Urban Systems*, and *Environment and Planning B: Urban Analytics and City Science.*

For future seminars, scan QR Code or visit:
https://www.grm.cuhk.edu.hk/en/news/seminars/